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APPLICANT : KURITA WATER IND LTD;

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TITLE : METHOD FOR RECOVERING CALCIUM FLUORIDE FROM FLUORINE-CONTAINING ETCHANT

ABSTRACT : PURPOSE: To purify and recover fluorine from an etchant as calcium fluoride by making the etchant having a specific molar composition range of ammonium fluoride and hydrogen fluoride to react with calcium carbonate at a specific temperature.

CONSTITUTION: In a method to recover fluorine as calcium fluoride from the etchant containing mainly hydrogen fluoride or hydrogen fluoride and ammonium fluoride, calcium carbonate is allowed to react with ammonium fluoride/hydrogen fluoride of ≤ 1.0 molar equivalent ratio at $\geq 50^\circ\text{C}$ to recover high purity calcium fluoride having about $\leq 3\%$ unreacted calcium carbonate content and little silica content.

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